AMENDMENT

IN THE CLAIMS:

Please amend the claims as follows:

1. (Previously presented) A thermal processing method including thermal processing steps having:

a step of holding a plurality of substrates by means of a substrate holder,

a step of conveying the substrate holder into a reaction container,

a step of heating a plurality of zones of thermal process atmosphere in the reaction container by means of a plurality of heating units, respectively, and

a step of forming thin films on surfaces of the plurality of substrates by introducing a process gas into the reaction container,

the thermal processing method comprising:

a first thermal processing step of carrying out the thermal processing steps by using a plurality of first substrates as the plurality of substrates, wherein thin films are formed on surfaces of the plurality of first substrates by less consumption of the process gas per film thickness than on surfaces of production substrates;

a first measuring step of measuring a thickness of the thin films formed on the surfaces of the plurality of first substrates for each of the plurality of zones of the thermal process atmosphere in the reaction container;

a first setting step of setting respective temperature set values of the plurality of heating units in such a manner that the thickness measured for each of the plurality of zones substantially coincides with a target thickness of thin films to be formed on the surfaces of production substrates, based on measurement result of the first measuring step;

a second thermal processing step of carrying out the thermal processing steps by using a plurality of second substrates, different from the plurality of first substrates, as the plurality of substrates, wherein thin films are formed on surfaces of the plurality of second substrates by more consumption of the process gas per film thickness than on the surfaces of the plurality of first substrates, and wherein the plurality of heating units are respectively adjusted to the respective temperature set values set by the first setting step;

a second measuring step of measuring a thickness of the thin films formed on the surfaces of the plurality of second substrates for each of the plurality of zones of the thermal process atmosphere in the reaction container;

a second correcting step of correcting the respective temperature set values of the plurality of heating units in such a manner that the thickness measured for each of the plurality of zones substantially coincides with the target thickness of thin films to be formed on the surfaces of production substrates, based on measurement result of the second measuring step; and

a third thermal processing step of carrying out the thermal processing steps by using at least a plurality of production substrates as the plurality of substrates, wherein the plurality of heating units are respectively adjusted to the respective temperature set values corrected by the second correcting step.

2. (Previously presented) A thermal processing method according to claim 1, wherein

the first setting step and the second correcting step are respectively carried out based on a relationship between variation of the temperature set values and variation of the thickness of the thin films, which have been obtained in advance.

3. (Original) A thermal processing method according to claim 1 or 2, wherein

in the thermal processing steps, the process gas is activated to generate active species, and oxide films are formed on the surfaces of the substrates by means of the active species.

4. (Original) A thermal processing method according to claim 3, wherein

the process gas comprises a hydrogen gas and an oxygen gas.

5. (Previously presented) A thermal processing method according to claim 3, wherein

the first substrates are substrates on which oxide films having an average thickness of 50 nm or more have been formed in advance.

6. (Previously presented) A thermal processing method according to claim 3, wherein

the second substrates are bare silicon substrates.

7. (Original) A thermal processing method according to claim 1 or 2, wherein

in the thermal processing steps, the thin films are formed on the surfaces of the substrates by means of a chemical vapor deposition.

8. (Original) A thermal processing method according to claim 7, wherein

the first substrates are substrates having surfaces on which patterns have not been formed, and

the second substrates are substrates having surfaces on which patterns have been formed.

9. (Previously presented) A thermal processing method according to claim 1 or 2, wherein

in the first thermal processing step, the first substrates are fully arranged in a holding region for substrates to be processed in the substrate holder, and

in the second thermal processing step, the second substrates are fully arranged in the holding region for substrates to be processed in the substrate holder.

10. (Original) A thermal processing method according to claim 9, wherein

in the third thermal processing step, the production substrates are arranged at a portion on an upstream side of a flow of the process gas introduced into the reaction container, in the holding region for substrates to be processed in the substrate holder, and the first substrates are arranged at the residual portion in the holding region.

11. (Original) A thermal processing method according to claim 10, wherein

a pressure in the reaction container, a flow rate of the process gas and a time of the thermal process are common in the second thermal processing step and in the third thermal processing step.

12-17. (Canceled)